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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/383,802	08/26/1999	DONG HO CHO	678-346(P887	7058

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EXAMINER

CORSARO, NICK

ART UNIT

PAPER NUMBER

2684

DATE MAILED: 01/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/383,802

Applicant(s)

CHO ET AL.

Examiner

Nick Corsaro

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 December 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-20 is/are rejected.
- 7) ☒ Claim(s) 5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 December 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Response to Amendment

Drawings

1. The corrected or substitute drawings were received on 12/18/2002. These drawings are accepted by the Examiner and have been approved by the Draftsperson.

Response to Arguments

1. Applicant's arguments filed 12/18/2002 have been fully considered but they are not persuasive.

The Applicant's features in the claims wherein a voice communication device in a packet switched mobile communication system having a layered protocol, includes a Wireless Packet Voice Convergence (W-PVCP) layer maps a voice packet of variable length generated only upon activation of voice traffic onto a packet frame of fixed length and a Medium Access Control (MAC) and physical layer for transmitting the mapped packet to a station on a channel, reads on Hulyalkar in view of Rumer as follows.

Hulyalker is stating a wireless communication network with mobile terminals using a packet based protocol with a layered architecture that performs transmission of both voice and data over the layered packet network, therefore, Hulyalker is showing a packet based voice communication device and network with layered protocol. Hulyalker states a layered architecture for the communication channels where the layers include several layers above the MAC and physical layers for mapping packets to the MAC and physical layers. Further, Hulyalker states a mapping of variable length packets from the upper layers to the lower layers and also states the

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reverse process of mapping between the lower layers to the upper, the direction of mapping dependent on direction of communication, respectively. Therefore, Hulyalker is stating a Wireless Packet Voice Convergence Protocol Layer for mapping the packets to the MAC and physical layers for transmission over the network. Hulyalker does not specifically show a mapping of variable length voice packets to fixed length packets, therefore, Rumer is used to modify Hulyalker and show it would be obvious to one skilled in the art to have such a layer. Rumer states an ATM protocol for that comprises a layer that maps variable length ATM voice packets to fixed length physical layer packets. As a result, the Applicant's features, read upon Hulyalker as modified by Rumer.

In response to the Applicant's argument that Hulyalker in view of Rumer does not disclose mapping voice data only upon activation of voice traffic, the argument is not persuasive, in that the limitation of only upon activation of voice traffic is vague in that the layers of any communication system will not map unless there is traffic to map. As such the limitation reads on the cited references. Further, Hulyalker and Rumer are showing a mapping upon sensing of the traffic.

In response to the Applicant's arguments that the Examiner did not address limitations of claims 9, 12, and 18, i.e., (1) the W-PVCP layer calculates a synchronization delay by utilizing a time stamp included in a first voice packet received from the MAC layer, buffers the subsequent voice packets for a predetermined time period base on the synchronization delay, and transmits the buffered voice packets to a packet voice application, (2) releasing the assigned packet voice channel when there is no voice data to be transmitted for a predetermined time, the argument is not persuasive in that within the Hulyalker reference, Hulyalker is stating buffering packets at

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the upper layers based on quality of service needed and where quality of service (QOS) is dictated based on the packet delay and type, where QOS is measured by development of a laxity factor that include round trip delay time. Further, Hulyalker calculates delay, wherein to calculate delay time stamps are necessary. Hulyalker does not particular show a time stamped in the W-PVCP layer, however, Rumer, (col. 8 lines 19-55), shows the time stamp for calculating the delay and synchronization of the voice packets. In the references, both of, Hulyalker and Rumer, show a release of the time slot, channel, or frequency, when, no voice is to be transmitted. Therefore, the combination of references does show the argued limitations.

In conclusion, the Applicant's features, are either the same as the cited combination or are not written clear enough to read around the cited combination, and therefore, read on the cited references.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2, 9, 12, 14, 15, and 18, are rejected under 35 U.S.C. 103(a) as being unpatentable over Hulyalkar et al. (6,198,728) in view of Rumer et al. (5,883,893).

Consider claims 1, 9, 12, 14, and 18, Hulyalkar discloses a packet-based voice communication device in a mobile communication system having, a layered-protocol architecture (see col. 4 lines 33-47 and col. 11 lines 26-36). Hulyalkar discloses a layer for

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mapping voice packets, and thus a W-PVCP layer for mapping voice packets of variable length (see col. 2 lines 13-18, col. 4 lines 40-46, col. 5 lines 8-22, and col. 5 lines 49-51). Hulyalkar discloses a MAC (Medium Access Control) layer and a physical layer for transmitting the mapped packet frame to a station on a channel (see col. 5 lines 1-26). Hulyalkar does not specifically disclose a W-PVCP (Wireless Packet Voice Convergence Protocol) layer for mapping a voice packet of variable length generated due to activation voice traffic onto a packet frame of a fixed length. Rumer teaches a W-PVCP (Wireless Packet Voice Convergence Protocol) layer for mapping a voice packet of variable length generated only upon activation voice traffic onto a packet frame of a fixed length (see col. 1 lines 24-30, col. 3 lines 19-24, col. 3 lines 35-40, and col. 3 lines 53-58). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Hulyalkar, and have a W-PVCP (Wireless Packet Voice Convergence Protocol) layer for mapping a voice packet of variable length generated due to activation voice traffic onto a packet frame of a fixed length, as taught by Rumer, thus allowing various wired line voice packet protocols to be mapped to the fixed length cellular protocol.

Consider claims 2 and 15, Hulyalkar discloses an upper point-to-point protocol layer (see col. 4 lines 64-67 and col. 5 lines 1-26). Hulyalkar does not specifically disclose mapping a voice packet of variable length. Rumer teaches mapping a voice packet of variable length (see col. 1 lines 24-30, col. 3 lines 19-24, col. 3 lines 35-40, and col. 3 lines 53-58). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Hulyalkar, and map a voice packet of variable length, as taught by Rumer, thus

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allowing various wired line voice packet protocols to be mapped to the fixed length cellular protocol.

3. Claims 3-4, 6-8, 10-11, 13, 16-17, and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hulyalkar in view of Rumer as applied to claims 1 above, and further in view of Kubler et al. (6,389,010).

Consider claims 3, 4, 16, and 17, Hulyalkar, discloses the system, method, and apparatus, as modified by Rumer above. Rumer further discloses a wait state (see col. 13 lines 15-26, col. 13 lines 1-67 and col. 14 lines 1-67). Hulyalkar and Rumer do not specifically disclose a low power state. Kubler teaches a low power mode (see col. 34 lines 23-40). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Hulyalkar and Rumer, and have a low power mode, as taught by Kubler, thus allowing a rest state when no packets are to be transmitted.

Consider claims 6-8, 10, 11, 13, 19, and 20, Hulyalkar and Rumer; do not specifically disclose a CRC area. Kubler teaches a CRC area (see col. 13 lines 20-42). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Hulyalkar and Rumer, and have a CRC, as taught by Kubler, thus allowing error detection.

Allowable Subject Matter

4. Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

2. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

3. Any inquiry concerning this communication should be directed to Nick Corsaro at telephone number (703)306-5616.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Hunter, can be reached at (703) 308-6732. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Or faxed to:

(703) 872-9314 (for Technology center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist). Any inquiry of a general nature or relating to the status of this

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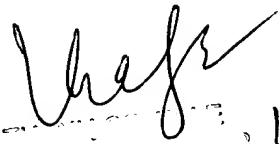
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application or proceeding should be directed to the Technology Center 2600 customer Service

Office whose telephone number is (703) 306-0377.

Nick Corsaro


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